

DA 1751

6 April 1978

1AB 14

CIA Threat
P. 1751
for 1st
SG
meeting

Soviet Long Range Theater Nuclear Forces

EXI

APPROVED FOR RELEASE
DATE: NOV 2004

--Soviet long-range nuclear forces have long constituted an important part of the Warsaw Pact's capability to execute nuclear strikes against European NATO. Ten years ago these forces--measured both in numbers of delivery systems and on-target weapons--were comparable in magnitude to Soviet intercontinental range "central systems."

Graphic I

(b) (1)
(b) (3)

Trends 1969-1979:

- The present mix of nuclear systems which the Soviets can bring to bear on the continental United States and European NATO, reflects the emphasis they have placed on the deployment of modern intercontinental range weapons. Dramatic growth has also taken place, however, in Pact medium-range theater nuclear forces, which have more than doubled since 1969.
- Growth in LRTNF over the past 10 years has been less dramatic. In fact, the number of delivery systems oriented on European NATO has actually declined since 1969 and currently stands at a level of almost 1200 missiles and medium bombers. However, the number of deliverable bombs, air-to-surface missiles and warheads has increased somewhat and currently totals nearly 2000.

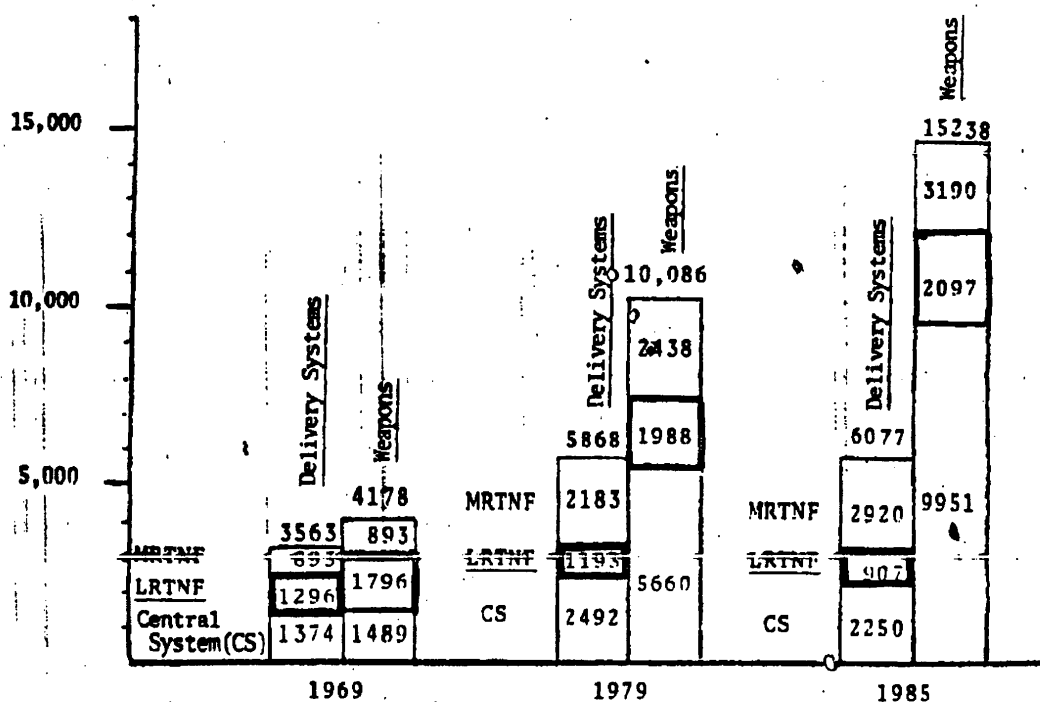
* PRA-38 and subsequent working groups have employed the NATO Nuclear Planning Group usage with respect to theater nuclear forces. According, throughout this text, Long-Range Theater Nuclear Forces (LRTNF) are those theater nuclear systems with missile range or aircraft radius of over 1000 kilometers. Medium-range systems (MRNF) are those with range or radius of between 100-1000 kilometers, and short-range systems (SRTNF) are those with ranges of less than 100 kilometers.

SECRET

7 2 0 0 9 SEC

GRAPH

Pact Nuclear Forces Oriented on the US and NATO,
in 1969, 1979 and Projected 1985^{1,2}



1. Includes "central systems" plus those medium and long-range (≥ 100 km) theater nuclear forces oriented on Europe.
2. Projections are consistent with NIE 11-3/8-78 and NIE 11-6-78.

Comparison with NATO:

- The magnitude of Soviet LRTNF with respect to NATO forces has not changed significantly, since 1969 even though the Allies--notably the French--have deployed several ballistic missile submarines. The US has also deployed F-111 aircraft to bases in the UK.

Graphic II

- Currently the number of in-place Soviet LRTNF delivery systems--as well as weapons--exceeds NATO's by a ratio of about 2.6:1. The composition of the NATO and Soviet force differs greatly, however, as exemplified by the relatively large share of Soviet weapons carried by land-based ballistic missiles.
- It is this specific set of Soviet LRTNF which concern the US and NATO and will be the focus of arms control efforts. In addition, it is the NATO LRTNF set represented on this graphic which is presently being considered for enlargement and modernization.
- In addition to the in-place NATO LRTNF, the US has committed 400 Poseidon RVs to SACEUR. The missiles which carry these weapons are already SALT constrained, however, and would therefore not be the subject of any LRTNF negotiations.
- Other long-range forces not represented on this graphic include the FB-111 medium bomber force, based in the US, as well as SACLANC-assigned and other US aircraft carrier nuclear strike forces.

Importance of Pact MRTNF:

- Soviet and Eastern European operated medium and short-range forces opposite NATO have recently exhibited substantial growth. They are of increasing importance in considering the numerical balance of Pact and NATO theater nuclear forces.

Comparison of Pact and NATO Theater Nuclear Forces in Europe in 1979
by Rangel, 2,3

NOTE: For all line items, the first figure indicates number of delivery systems, and the second () the number of weapons.

Long-Range
(Systems Over 1000 KM)⁴

	Soviet	NATO		Pact	NATO
SLBM	30 (30)		SSBM	534 (534)	
MR/IRBM	469 (595)		Aircraft	1290 (1545) ⁶	
Aircraft	694 (1363)		Other	359 (359) ⁷	
Total	1193 (1988)			2183 (2438)	

Short-Range
(Systems Under 100 KM)

	Pact	NATO
Rockets	592	
Tubes	288	
Other	72	
Total	952	

1. Concept used is that of an unbalanced one-time only exchange. Aircraft and missile launcher reloads are not included.

2. Geographic area included in European NATO, Eastern Europe, the eight western-most military districts of the Soviet Union, the two western LRA commands, and the three western Soviet fleet areas.

3. Includes French systems.

4. Some "central system" missile tubes--Soviet, UK and French.

5. Excludes committed to SACEUR, but already taken account of as central systems.

6. In accordance with PRM-38, only "SACEUR nuclear-tasked aircraft are counted rather than nominally nuclear capable. For the Pact, only those aircraft for which nuclear trained pilots are currently available are counted.

7. Counting based upon nominally nuclear capable aircraft would result in Pact/NATO totals of 2855/2140 delivery systems, respectively.

8. Nike-Hercules SAMs modified to be secondarily capable of surface-to-surface strikes.

--With the recent Soviet deployment of nuclear artillery, the Pact has enhanced its short-range theater nuclear forces, which now slightly outnumber those of NATO.

--Soviet and Pact MRTNF now exceed the in-place medium-range forces of NATO by a ratio of nearly 1.8:1 in delivery systems, and 2:1 in weapons. In numbers, the Pact possesses nearly 2,200 delivery systems capable of delivering about 2,400 weapons. Over half the delivery systems are dual-capable tactical aircraft, most of which have been deployed within the past 10 years.

--The significance of asymmetrical geographic circumstances is illustrated by the fact that, from forward bases in Eastern Europe, Pact MRTNF can strike practically every target of consequence in Western Europe, while NATO MRTNF can reach only a few major targets on the western fringes of the Soviet Union.

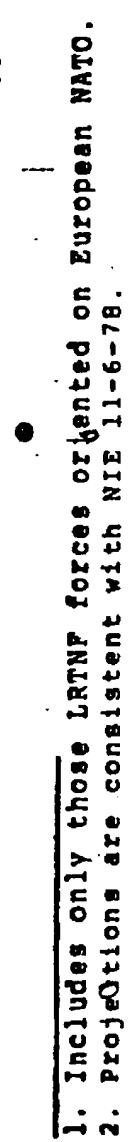
--These Soviet and Pact medium range systems will not be considered in arms negotiations which are definitionally restricted to LRTNF. In addition, most of the Soviet tactical aircraft are deployed within the Soviet Union, and are hence not presently treated in the MBFR forum.

Projections in Soviet LRTNF

--Refocusing on Soviet LRTNF... As noted earlier, the actual number of delivery systems in this category has decreased since 1969. This decrease will continue, and it is projected that by 1985 only about 900 systems will be operational opposite Europe.*

* These projections are based upon the moderate level of effort deployment pattern described in NIE 11-6-78. A larger 1985 force could result from a higher level of effort than anticipated, or the retention of SS-4/5's in the force for arms control bargaining purposes.

2



1. Includes only those LRTNF forces oriented on European NATO.
2. Projections are consistent with NIE 11-6-78.

Graphic III

- These relatively modest quantitative changes in Soviet LRTNF are overshadowed, however, by significant, concurrent qualitative changes in the Soviet force. Principal among these are continued deployments of the Backfire medium bomber and the SS-20 IRBM.
- There are presently about 100 Backfires operational with the Soviet Northwest and Southwest bomber commands and the three Western fleet areas. Some 230 will probably be operationally deployed in these areas by 1985, and will be distributed about equally between Soviet naval and long-range aviation, largely as replacements for older aircraft.
- The low altitude and supersonic capabilities of the Backfire, as well as its improved avionics, and its stand-off ALCM armament, render it particularly suitable in the naval strike role, or as a complement to ballistic missiles in the land attack role.
- The first SS-20 IRBM launchers probably became operational in 1977, and about 60 are now thought to be oriented against Europe. It is projected that almost 200 will be arrayed against NATO by 1985.
- Its three to four independently targetable warheads are significantly more accurate than the single SS-4/5 warhead, and its mobile basing mode renders it vastly more survivable. It uses solid fuel, and for this and other reasons has a faster reaction time than the SS-4/5. The system probably will ultimately be deployed with two refire missiles.

Graphic IV ~

Importance of SS-20 Refires

- Given currently planned NATO TNF modernization programs, Soviet LRTNF--even without SS-20 refire missiles--will by 1985 exceed NATO's by a factor

~~SECRET~~

GRAPHIC

Comparison of Soviet and NATO LRINF in Europe
in 1985, With and Without SS-20 Refires^{1,2}

NOTE: For all line items, the first figure indicates the number of delivery systems, and the second () the number of weapons.

Without SS-20 Refires

Pact NATO

SLBM 3 (3)
MR/IRBM 229 (688)
Aircraft 675 (1406)

LRINF 907 (2097)

*Central System
Supplements*

UNK⁵

Total

907+(2097+)

With SS-20 Refires³

Pact NATO

3 (3)
625 (2062)³
675 (1406)

1303 (3411)

*Central System
Supplements*

UNK⁵

2303+(3411+)

1. Soviet Projections are based upon NIE 11-6-78.

2. Assumes NATO TNF modernization programs of currently foreseeable character and pace.

3. Based upon a projection of 2 refires per SS-20 launcher. It is felt that that about one-third of the SS-20 force will be equipped with a-MIRV warheads.

4. Reflects projected changes in French theater nuclear inventories. In 1986 a sixth French SSBN will probably be operational, and will provide an additional 16 missiles.

5. An unknown number of Soviet ICBMs and intercontinental range SLBMs may be targeted on Europe.

SECRET

- of 2.8:1 in on-target weapons. When refire missiles are incorporated into the analysis, this ratio increases to 4.5:1.

--The inclusion of the 400 US Poseidon RVs into this comparison is offset to a unknown degree by the "central system" ICBMs and SLBMs which the Soviets are believed to have targetted against Europe.

Graphic V

Implications

- Improvements in Soviet and Pact theater nuclear forces at all levels are important in several ways...
- The growth and modernization of medium-range TNF enhance the Pact's ability to wage war in Central Europe at whatever level NATO or they themselves choose, without having to resort to USSR based bomber or missile forces.
- Once the mobile SS-20 is deployed in larger numbers, the increased survivability characteristics of this force will render it practically [redacted] This in turn will enable the Soviets to behave with greater confidence and restraint in a nuclear or near-nuclear conflict.
- If USSR-based TNF are employed, the large number of SS-20 warheads--including refires--and the high accuracy characteristics of that weapon would insure a high probability of prompt destruction of targets in Western Europe.
- In theory these developments increase substantially the Soviet/Pact ability to execute a variety of limited nuclear warfare options--in contrast to previous strategic doctrine which visualized a massive nuclear pre-emptive strike, or response to NATO's first use. In recent years, Soviet planners have been examining such nuclear options and contingencies.

7 9 0 0 9 0 1 5 0

~~SECRET~~

GRAPHIC

Implications of Soviet/Pact TNF Improvements

- : --Increased ability to wage nuclear war in Europe without escalating to USSR-based forces.
- If USSR-based TNF are considered...
 - High survivability characteristics of SS-20 will permit the Soviets to behave with greater confidence and restraint.
 - Large numbers of SS-20 warheads/refires and high accuracy characteristics insure high probability of prompt target destruction.
 - In theory these developments...
 - Enhance Soviet capabilities to execute limited nuclear options.
 - The Soviets are presently exploring such options.
 - Currently, however, Soviet planners appear pessimistic about prospects of containing intensity and geographic scope of any nuclear conflict.
 - Growing Soviet/Pact nuclear superiority at all levels could cause Soviets to believe that NATO might be reluctant to employ nuclear weapons in response to a conventional attack.
 - Current NATO TNF modernization programs would not be viewed as altering these trends.

~~SECRET~~

--These doctrinal reviews notwithstanding, Soviet writings and other evidence indicate that Soviet planners see little prospect of containing the intensity and geographic scope of a conflict once the nuclear threshold has been crossed by either side.

--Perhaps the most significant implication of the growing Soviet and Pact nuclear superiority--at all levels--is the prospect that the military advantages to NATO of introducing nuclear weapons into combat have decreased. Consequently, the Soviets may believe--increasingly--that NATO might be reluctant to employ nuclear weapons in response to a conventional attack.

--Currently programmed NATO modernization steps would probably not be viewed as altering these foreseeable and--for the Soviets--favorable nuclear force trends.